

REMARKS

I. Introduction

With the cancellation of claims 1 to 8 herein, claims 9 and 10 are pending in the present application with claims 9 and 10 elected for further prosecution. Applicants respectfully cancel claims 1 to 8 in conformance with the restriction requirement of July 8, 2004 as belonging to the non-elected embodiment.

II. Rejection of Claims 9 and 10 Under 35 U.S.C. § 103(a)

Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,356,614 (“Annen et al.”) in view of U.S. Patent 5,752,311 (“Snyder”). Applicants respectfully submit that claims 9 and 10 are patentable for the following reasons. Amended claim 9 relates to a method for repairing a fuel assembly, comprising the steps of providing a repair sleeve, the repair sleeve having a shaft with a first end, a second end and a diameter, the diameter configured to fit into a guide thimble opening of a top nozzle of the fuel assembly, wherein the diameter of the shaft is dimensioned such that an exterior of the shaft snugly fits into the guide thimble opening, wherein the shaft has at least two openings, and at least two tendons extending through the openings, the tendons configured to deflect in an instance of a horizontal load on the tendon, the tendons having a dimple configured to be inserted into a dimple of a guide thimble sleeve, and inserting the repair sleeve in the guide thimble opening in the top nozzle of the nuclear fuel assembly such that the dimples of the tendons project into the dimples of the guide thimble sleeve; and inserting a thimble insert assembly into an interior of the repair sleeve.

The Office Action submits that the primary Annen et al. reference discloses a means for improving the structural integrity of a nuclear fuel assembly by expanding the internal surface of a fuel assembly sleeve (item 2) comprising a sleeve (item 4), a shaft (item 6) inserted in said sleeve, an expanding means through a flared surface (item 14) into a flared surface in said sleeve (item 12) and relating to claim 10, the said sleeve controls the deflection of the said sleeve as allegedly shown in figure 1. The Office Action admits that the Annen et al. reference does not disclose the use of sleeve opening and tendons.

The Office Action also submits that the Snyder reference discloses that is well known in the nuclear sleeve/tube component art to use expansion means by the use of tendons.

Annen et al. provides an anchor assembly for fuel bundles. Title. A lifting fixture 50 is attached to an upper end fitting 22 through the use of lifting arms 52 which have extended tabs 58. The tabs 58 interface with ledges 60 to allow the lifting fixture 50 to lift the fuel assembly. See Figure 2. As provided in Annen et al., Figure 3 illustrates an elongated sleeve 100. the sleeve is cylindrical with respect to the centerline and constructed

from material such as stainless steel. Col. 4, lines 11 to 16. The sleeve 100 has a proximate end 102 and a distal end 104, the distal end adapted for insertion into the receiving end of a guide tube. Col. 3, lines 17 to 19. In the embodiment shown, the sleeve 100 is about 5.5 inches long. Col. 5, lines 59 to 66. The anchor assembly consisting of the sleeve and the pin are inserted into the guide tube of a fuel assembly. Col. 6, lines 35 to 37. The anchor is inserted such that the load surface 107 contacts the upper end fitting (22). Col 6, lines 37 to 40. A hydraulic ram then applies force to move the pin into the sleeve wherein the sleeve contacts the guide tube. Col. 6, lines 48 to 52. The Annen et al. reference does not disclose or suggest the step of inserting the repair sleeve in the guide thimble opening in the top nozzle of the nuclear fuel assembly such that the dimples of the tendons project into the dimples of the guide thimble sleeve, because, in fact, Annen et al. do not disclose or suggest any connection to a dimple area of a guide tube. Instead, the Annen et al. reference merely provides a radial connection between the sleeve and the guide tube. The Annen et al. reference do not disclose or mention any connection to a dimple area. Instead, the Annen et al. reference uses a radial locking mechanism, different than the dimple locking method provided in the current application.

The addition of the Snyder reference does not cure the critical defects of the Annen et al. reference. The Snyder reference relates to a method for expanding tubular members. Title. As is discussed in the Snyder reference, the tubular members deformed are those found in nuclear steam generators. Col. 1, lines 8 to 12. In the only method disclosed in the Snyder reference, a steam generator, not a fuel assembly, is removed from service. Col. 8, lines 55 to 58. A mandrel is inserted into the manway 160 of a inlet plenum chamber where it is engaged by a support mechanism 270 for aligning the longitudinal axis of the mandrel 210 with the longitudinal axis of the tube 60 to be deformed. Col. 8, lines 63 to 67. At the desired location to be deformed, a bladder 220 is filled with fluid, thereby deforming the tube 60. Col. 9, lines 20 to 24. Snyder does not disclose or suggest any applicability of the Snyder technology to repair of fuel assemblies. Moreover, the Snyder reference deforms the tube into which the mandrel is placed, contrary to the present invention which uses a dimple area for load transfer, not a radial expansion technology.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s)

must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Moreover, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office Action's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Office Action reflects a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the present Office Action offers no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address the problems met

thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the references to provide the claimed subject matter.

More recently, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a “technologically simple concept” — which is not the case here — there still must be some finding as to the “specific understanding or principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed,” stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Again, it is believed that there have been no such findings.

III. Conclusion


It is respectfully submitted that all pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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